INTER-REGIONAL TRANSIT ISSUES

IN THE

GREATER TORONTO AREA

Metropolitan Planning Department

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A. INTRODUCTION

The Ministry of Transportation and Communications in response to ongoing growth in inter-regional transit trip making, has commissioned a series of studies since 1982 on improving inter-regional transit. The first study, by the consulting firm Paterson Planning and Research, reviewed issues and alternatives for improving inter-regional transit co-ordination within the Greater Toronto Area. That study concluded in 1984 with the release of the "Paterson Report", entitled "Inter-Regional Transit Co-ordination, An Implementation Plan". The main recommendations of this report were that MTC assume the responsibility for the co-ordination of inter-regional transit within the Greater Toronto Area and that a Transit Forum be established comprised of representatives of the transit operating agencies within the Greater Toronto Area. The MTC subsequently formally established the "Transit Forum" as an advisory group on the operational issues related to improving transit services.

Following completion of the Paterson report, the Ministry of Transportation and Communications commissioned a study by the IBI Group on transit fare integration in the Toronto Area. This study, completed in March 1985, was the initial phase of a larger study on fare integration and presented a review of existing fare policies, developments in other jurisdictions and future cross-boundary transit needs. The other phases of this study, which were intended to produce a preferred strategy on fare integration, have yet to be formally completed and released.

Currently the M.T.C. has underway a study by the management consulting firm of Stephenson-Kellogg to assess various subsidy policy options for cross-boundary transit services.

In July, 1986, the Minister of Transportation and Communications appointed the Transit Advisory Group to advise the Minister on the institutional alternatives available for improving transit services for cross-boundary travel in the GO Transit service area. This Group is comprised of the following members:

Al Cormier:	Executive Director, Canadian Urban Transit Association;
Francis Frisken:	Professor, Joint Program in Transportation, University of Toronto/York University;
Lynne Gordon:	Consumer advocate; and
Richard Soberman:	Director, Joint Program in Transportation, University of Toronto/York University.

The Transit Advisory Group has been receiving submissions from various interested parties and municipal agencies including one from the Toronto Transit Commission entitled "A Paper on Inter-Regional Transit Issues" presented to the Group on March 24, 1987.

This discussion paper has been prepared for submission to the Transit Advisory Group at the request of the Metropolitan Transportation Committee and the Chairman's Committee on Regional Transportation Issues. It describes existing and future inter-regional transit travel, presents a case for improved integration of inter-regional transit service within the G.T.A. and examines the planning, financial, level of service and organizational issues of integration from a Metropolitan perspective. Throughout the paper differences and similarities to the conclusions of the T.T.C's paper are noted.

B. EXISTING AND PROJECTED FUTURE INTER-REGIONAL TRANSIT TRAVEL

At present seventeen agencies provide transit services within the GO Transit commutershed, (the Toronto - Hamilton region). These seventeen agencies combined carried 518 million riders in 1985 of which the T.T.C. carried 83.4%. Thirteen of the seventeen agencies operate within the Greater Toronto Area (excluding Halton and Hamilton-Wentworth Regions). These thirteen agencies combined, carried 484 million riders in 1985, of which the T.T.C. carried 89.4%.

1. Existing Cross-Boundary Service

Five agencies - T.T.C., GO Transit, Mississauga Transit, Brampton Transit and Markham Transit - provide service across the Metropolitan Toronto boundary while a sixth, Vaughan Transit, is planning to start a bus service into the Finch subway station as of November, 1987. The five transit agencies operate 48 different cross-boundary rail and bus services (summarized in Table 1). In addition, five bus services operated by Vaughan Transit and Markham Transit connect directly with T.T.C. bus services at Steeles Avenue. As shown in Table 1, total annual cross-boundary ridership is 31.6 million which is about 7% of total 1986 T.T.C. ridership (441 million). Of the total cross-boundary ridership, 68.3% is carried by GO Transit services (both rail and bus), while over half of the remaining (31.7%) is carried by Mississauga Transit bus services.

All GO Rail and most GO Bus services, as premium services, operate on a fare by distance system. Cross-boundary transit trips utilizing municipal bus services generally require two fares (i.e. both a T.T.C. fare and a fare for the system outside Metro). For the portion of Mississauga, Brampton and Markham Transit services within Metro Toronto, "closed door" operation must be maintained to be consistent with the Metropolitan Toronto Act, which gives the T.T.C. a monopoly to operate within the Municipality. GO Transit deficits are subsidized 100% by the Province and, until recently, the deficits

incurred by cross-boundary municipal bus services were also subsidized 100% by the Province. Currently there exists a Provincial "freeze" on subsidies for new cross-boundary routes.

Counts taken across the Metropolitan boundary as part of the biennial Metro Cordon Count Program, show that the volume of inbound total person trips during the 7:00 - 9:00 a.m. peak period on an average weekday have increased from about 90,000 person trips in 1975 to over 173,000 person trips in 1985. During the same ten year period, a.m. peak period outbound person trips increased from 59,000 to approximately 98,000. The percentage of total person trips inbound by transit for the 7:00-9:00 a.m. peak period has increased slowly but steadily from 13.6% in 1975 to 17.6% in 1985, while the percentage of total person trips outbound by transit increased from 8.4% in 1975 to 10.2% in 1985. The increases in transit trips by GO Rail and (all) bus across the west, north and east segments of the Metropolitan boundary in both directions for the 7:00 - 9:00 a.m. peak period are summarized in Table 2. Inbound cross-boundary transit trips have a strong orientation to the Central Area as GO Rail has consistently carried over half of the total number. In the outbound direction during the a.m. peak period over 95 percent of all transit trips were via local bus transit services. The 1985 cordon counts show that in the a.m. peak period, 64% of the inbound transit trips across the Metro boundary are from the west, 22% from the north and 14% from the east.

Comparative 1985 modal split statistics for the Suburban and Central Area cordons within Metropolitan Toronto, show that the percentage of person trips made by transit are substantially higher than at the Metropolitan boundary. The a.m. peak period percentage of inbound trips by transit is 41.8% at the Suburban cordon and 65.0% at the Central Area cordon compared to only 17.6% at the boundary. As transit modal splits generally decrease with increased distance from the downtown core, the transit modal split crossing the Metropolitan boundary would be expected to be somewhat lower than the 41.8% observed at the Suburban cordon. In this case,

the substantial difference is no doubt due to a number of factors including the lack of a comprehensive network of continuous and coordinated transit services across the boundary.

2. Future Cross-Boundary Travel

Forecasts of population, employed labour force and employment for the Greater Toronto Area prepared by the Metropolitan Planning Department to the year 2011 predict that Metropolitan Toronto's population will stabilize at its existing level, its employed labour force will peak about 1991 and then decrease, and its employment will grow by some 245,000 jobs. Within Metropolitan Toronto, approximately one-third of the new jobs are projected for the Central Area with the vast majority of the remainder expected to be located in suburban areas, primarily in sub-centres and other locations near rapid transit stations. For each of the Regions beyond Metropolitan Toronto, substantial population growth, and to a lesser extent employment growth, is forecast. As a result of these projections, the ratio of number of workers to number of jobs for Metropolitan Toronto is expected to decrease significantly indicating an increasing Metropolitan reliance on the growing labour force in the adjacent Regions. Furthermore, the impact on commuting patterns will be exacerbated since the Metropolitan labour force itself will increasingly be taking advantage of the growing numbers of job opportunities in the suburban areas outside Metropolitan Toronto, thus requiring still more commuters from the Regions to fill Metropolitan jobs.

Based on the above demographic forecasts and travel patterns observed from the 1981 Census journey-to-work data, forecasts of cross Metro boundary 24 hour work trips were prepared for the year 2011. Overall, inbound work trips to Metro are expected to more than double (using 1981 as a base), with inbound trips across the Steeles Avenue screenline showing the greatest growth (the 2011 forecasts were approximately two and a half times greater than the 1981 volumes). Even if the percentage of cross-boundary trips by transit remained constant, this would represent significant growth in the number of transit trips. However, based on past transportation studies, it

is recognized that, given the existing configuration of the road network, very little additional road capacity can be provided across the West boundary and across the central portion of the North boundary (i.e. from Dufferin to Leslie Streets). Therefore, if the future travel forecasts are to be accommodated, strategies will need to be developed to significantly increase the percentage of trips made by transit in these areas. For example, across the West boundary a target of 35% of total trips by transit during the peak period should be strived for, compared to the existing (1985) transit modal split of 22.3% in the a.m. peak period.

Assuming that transit improvements will be made which would allow the transit modal split to continue to increase to 35% at the West boundary by the year 2011, to 25% at the north and to 30% at the east, the following estimates of inbound cross-boundary transit ridership in the 7:00 - 9:00 a.m. peak period would result (1985 figures in parenthesis):

West boundary	54,200	(19,600)
North boundary	32,100	(6,800)
East boundary	9,900	(4,200)
Total	96,200	(30,600)

This indicates more than a tripling of peak period transit trips over the 1985 base of approximately 30,600 and an absolute growth of some 65,600 transit trips.

Based on employment growth projections for the Central Area and an understanding of the likely origins and modal split of the resultant new trips to the Central Area, estimates of GO Rail and bus trips across the Metro boundary have been prepared and are compared with 1985 Cordon Count statistics in Table 3. Peak period transit trips are estimated to almost triple for the west, more than quadruple for the north and more than double for the

east boundaries. At the West and North boundaries, more than half of of the growth in travel is expected to be accommodated by the bus system, whereas at the East boundary about two-thirds of the growth in travel is expected to be accommodated by the GO Rail system. Overall GO Rail peak period ridership would be 2.65 times as great as 1985 volumes, and bus peak period ridership would be 3.77 times as great as 1985 volumes.

In addition, there are expected to be significant increases in the number of transit trips in the off peak direction of travel (i.e. Metro residents commuting to jobs in the adjacent Regions) during peak periods, mostly on cross-boundary bus services.

To achieve these levels of transit trip growth, significant improvements to the existing transit services will be required. For example, to meet the GO Rail demands projected crossing the West Metro boundary, full service would be required on the Milton and Georgetown lines at a level equivalent to that now operated on the Lakeshore West line (i.e. 10 minute peak period service). Furthermore, to meet the bus demands across the West boundary, approximately 4 times as much peak period service as exists today would be required (assuming no new rapid transit service was implemented). With respect to the latter point, however, it should be noted that, the Network 2011 study concluded that an Eglinton West rapid transit line will be necessary by the year 2011. Such a facility would either be fed by the proposed Mississauga busway or in fact, be extended across the boundary to connect directly to Mississauga City Centre.

It should be emphasized that, to accommodate the expected number of bus movements at a satisfactory level of service, it will be necessary to expand the capacity of the cross-boundary road system and employ appropriate traffic system management (TSM) measures so that it operates in a highly efficient manner.

Recognizing the relatively low density of residential communities in the suburban municipalities beyond the Metropolitan boundary, it may be difficult to provide such significant increases in local transit service in a cost effective manner. Nevertheless every effort will have to be made. Improvements will not only have to be in the form of capacity increases, but also in the form of fare integration and service coordination between the Regions and Metropolitan Toronto. The latter will be required to make the transit option more attractive so that commuters will use the capacity provided.

C. NEED FOR IMPROVED INTEGRATION OF TRANSIT SERVICES

1. Past Metropolitan Toronto Positions

Over the past year, a number of reports have been prepared by Metropolitan and T.T.C. staff which have recognized the need for transit fare and/or service integration:

- Railway Lands Precinct 'A'-
  Metropolitan Council adopted a recommendation to "request the Ministry of Transportation and Communications, GO Transit and the Toronto Transit Commission to pursue the matter of GO Transit/T.T.C. fare integration at Union Station as a high priority, with the objective of having a scheme in place prior to the opening of the Harbourfront L.R.T. line".

- West Metro Boundary Transportation Review -
  As part of a comprehensive strategy, Metro/T.T.C. staff recommended introduction of fare and service integration with GO Transit, Mississauga Transit and Brampton Transit for cross-boundary transit travel (including fare integration at Union Station) to arrive at a more equitable transit fare structure, improved grid of transit services and more direct routing, all of which would encourage a shift from auto to transit usage.

- Network 2011 -
  Metropolitan Council recommended that the Minister of Transportation and Communications be requested to co-ordinate discussions among the operators "regarding fare and service integration for cross-boundary trips, including development of an implementation program and cost-sharing agreements for specific initiatives".

- Future Transportation Needs in the Greater Toronto Area -
  Metropolitan Council indicated its support for the implementation of

fare and service integration "provided that a financial arrangement acceptable to Council can be developed which would have no adverse impact on T.T.C. fares, levels of service or to the taxpayers of Metropolitan Toronto".

These recent positions were consistent with the Metropolitan staff position on the Paterson report which was submitted to the Deputy Minister of M.T.C. in early 1984 by the Planning Commissioner in consultation with the Chief Administrative Officer, and indicated general support for its recommendations.

2. Demand

As noted in Section B, inter-regional transit trips across the Metropolitan boundary will increase significantly and could triple by 2011 to approximately 96,200 trips inbound during the a.m. peak period with the achievement of target transit modal splits. In order to accommodate these trips significant improvements to the existing inter-regional transit services are required. Not only must the overall level of service be increased to satisfy these trips, but the quality of the services must also be enhanced so that commuters will be encouraged to use transit instead of their personal automobiles. The attractiveness of these services can be enhanced considerably through fare integration and service coordination.

3. Service Coordination

There are three categories of service coordination which are discussed separately in the following sub-sections.

(a) Municipal or GO Bus with T.T.C. Services.

As summarized in Section B, there currently exists a reasonable degree of this type of service coordination. However, as pointed out in the T.T.C. paper, it is highly oriented to feeding the subway system and generally operates "closed-door" within Metropolitan Toronto. For

example, 11 of 17 Mississauga Transit services operating within Metro feed the Islington subway station and all 17 routes operate "closed-door" within Metropolitan Toronto. A similar situation exists with Markham Transit to the north, whose service generally feeds the Finch subway station. As noted in the report on the West Metro Boundary Transportation Review, what is required is an extension of the grid network of routes across the Metropolitan boundary to serve the short distance trips. This should be implemented in such a way as to minimize route distance and therefore costs, and to enhance the level of service (e.g. by eliminating "closed-door" policies). Extensive planning will be required to determine the need for improved cross-boundary services in various corridors and which operator can most effectively provide the recommended services. Determination of the need should be undertaken in the broader transportation planning context which recognizes municipal policy objectives and capacity limitations on the road network and rapid transit facilities.

(b) GO Rail with T.T.C. Subway

While there exists a limited degree of coordination of this type, there is potential to enhance overall transit accessibility with improved connections. The best example of this type of integration is at Union Station, which is the focal point of the GO Rail system. Another example is at Kipling subway station (with the Milton service). Opportunities exist however, to establish or significantly improve integration at a number of other locations such as Main subway station (with the Lakeshore East service), and Castle Frank/Broadview subway stations (with the Richmond Hill service). Figure 1 shows the entire set of opportunities for improved service coordination between GO Rail services and the subway system. It should be recognized that in many situations (e.g. where relocation of an existing or provision of a new GO station is required), service coordination will be relatively costly to achieve and it will, therefore, be necessary to undertake feasibility studies and to carefully weigh the benefits against the costs before final decisions are made.

(c) GO Rail with T.T.C. or Municipal Bus

A significant degree of this type of coordination has been achieved over the last few years outside Metropolitan Toronto, particularly to the west in Mississauga, Brampton and Oakville. Within Metropolitan Toronto there is limited coordination of this kind. The best opportunity for improvements within Metropolitan Toronto appears to be in Scarborough where there are four GO Rail stations on the Lakeshore East line which are not ideally located to facilitate transfers to and from T.T.C. bus services. At the present time, virtually all T.T.C. bus services in central and eastern Scarborough, feed the Danforth subway line. A reorientation of some routes, or parts of routes, together with improved connections between the GO stations and the bus stops would enhance the ability to achieve the optimum use of both the Danforth subway and the Lakeshore East GO service. This would contribute to the deferral of the proposed downtown relief line since it is heavy subway ridership transferring from the east that contributes most to the congestion at the Bloor/Yonge station, which in turn limits the capacity of the existing Yonge subway line.

Similarly, there is potential for the Sheppard and Finch East bus routes to feed the Richmond Hill GO Rail service, which would reduce ridership on the Yonge subway. Improved service coordination at these locations would best be achieved by relocating the GO stations (from Highway 401 to Sheppard Avenue and from the Finch Hydro right-of-way to Finch Avenue). While other examples within Metropolitan Toronto exist (e.g. in the Rexdale and Weston areas), the above two applications offer the added benefit of relieving congested subway lines and stations.

The success of service coordination at GO stations is dependent to some extent on the service frequency provided on the GO Rail line. The full benefit of the service coordination between the T.T.C. and GO Rail may not be achievable without increases in the GO Rail service

frequency that would limit the transfer waiting times between the high frequency bus services and the comparably low frequency rail service. Prior to implementing this type of service coordination. the benefits and costs will require further investigation through feasibility studies and/or demonstration projects.

4. Fare Integration

There are two scenarios to assess in looking at the question of fare integration:

Co-ordination of fare systems between various transit authorities with and without reduced fares for trips using the services of two or more authorities.

Even without reduced fares the convenience benefits of common ticketing systems among the various authorities would promote the use of transit. For example, joint passes could be implemented and sold by all of the participating authorities. Such a proposal was supported by the T.T.C. (with a demonstration at Union Station) and should also be supported by Metropolitan Council in view of its previous position with respect to the need for fare integration at Union Station by the time that the Harbourfront L.R.T. line opens.

A strong case can be made for reduced fares for cross-boundary trips and trips made totally within Metropolitan Toronto using both GO and T.T.C. In the case of cross-boundary trips, a much higher transit modal split needs to be achieved, particularly across the west and north Metro boundaries if travel forecasts are to be accommodated. In the West Metro Boundary Transportation Review, it was concluded there was an extremely low transit modal split (in the order of 5%) for cross-boundary peak period work trips destined to locations within Metropolitan Toronto other than the Central

Area. In particular, cross-boundary transit trips penetrating only a short distance into Metro (e.g. to employment opportunities in the south Etobicoke industrial area or in Rexdale), if requiring a transfer to T.T.C. services, are excessively penalized by requiring two fares. Given the labour force increases in the Regions beyond Metropolitan Toronto and the emplovment increase in the suburban areas of Metro, the potential is great for these types of trips to increase significantly over the next 25 years.

Within Metropolitan Toronto, there are relatively few trips made by Metropolitan residents that use both T.T.C. and GO Transit services due in large part to the high cost. Since the majority of GO riders use the system 5 days/week, it would seem reasonable to implement a joint pass which would sell for less than the total of the two separate fares. Such a fare policy, together with improved service coordination, could be used as an effective tool to reduce congestion on parts of the Metropolitan subway system. While there would be lost revenues (to a maximum of approximately $8 million on an annual basis; assuming the existing GO Transit/municipal transit compensation of 75% of the single adult fare the loss to the T.T.C. would be about $2 million), associated with such a scheme, these would be at least partially offset by cost savings from reorganization of T.T.C. bus routes and additional revenues from new transit riders. More in-depth study would be needed of the financial implications of such a pass before the amount of the price discount is determined.

Various fare collection and fare policy alternatives are discussed in the T.T.C. paper. While the two zone system (with Metropolitan Toronto as zone 1) would be the easiest to implement since it is basically the status quo, the option which would best promote the use of transit for inter-regional travel is "free transfers" between municipal transit systems and this option should be seriously considered. In determining the limits of any extended single zone fare system, the distance from downtown Toronto should be an important criterion. For example, Figure 2 shows radii at 6 km. intervals emanating from the downtown core. The 30 km. radius which includes the north east

corner of Scarborough also includes a small portion of Pickering, all of urbanized Markham, Richmond Hill and Vaughan, a portion of Brampton northwest of the international airport, most of Mississauga and a small portion of Oakville. From an equity point of view, Mississauga, Vaughan, Richmond Hill and Markham should be part of any extended single zone system. The 36 km. radius would include the urbanized portion of Pickering, virtually all of Markham, Richmond Hill and Vaughan, most of Brampton and all of Mississauga. Going one radius further (to 42 km.) would also include Ajax and all of Brampton and Oakville. Even if an extended single zone system is rejected, any new inter-regional fare policy should be more equitable for commuters from Peel and York Regions than the current system.

The financial impacts of establishing such an extended single zone system are not as severe for Metropolitan Toronto as one might initially think, since it is only the cross-boundary trips that will require additional subsidy (based on 1986 ridership figures, the lost revenue to the T.T.C. would be $4.2 million annually). The financial impacts in terms of lost fares and additional subsidies would need to be determined by Metropolitan Toronto, the outlying municipalities and the M.T.C., and an acceptable formula negotiated. The benefits to the rider in terms of reduced cost and additional convenience would be substantial and would go a long way towards making suburban transit more attractive. In addressing the options, the key question is "who pays the increased subsidies" for reduced or eliminated fares.

D. ISSUES FOR METROPOLITAN TORONTO

Inter-regional transit is an important Metropolitan Toronto issue because the vast majority of inter-regional transit trips will be crossing the Metro boundary and using a transit service that is provided and largely paid for by the residents of this municipality. It is, therefore, imperative that Metropolitan Toronto develop positions with respect to the major policy issues associated with inter-regional transit service.

1. Planning Issues

As described in Section B, travel across the Metropolitan boundary, particularly for work trips, will increase significantly in the future. A greater percentage of the new trips will be attracted to transit, simply because road capacity within the corridors of high travel demand will continue to be insufficient to handle substantial increases in peak period demand.

While it is apparent that an overall transit strategy is required to minimize cross-boundary congestion, it is equally apparent that there is no single transit solution. The West Metro Boundary Transportation Review identified a range of possible solutions, including improved GO Rail services for Central Area destined trips, point-to-point cross-boundary bus services for Etobicoke destined trips and integration between Mississauga Transit and T.T.C. bus services (beyond those subway oriented services which currently exist) to provide an expanded grid of services to improve access to dispersed Metro destinations. While GO Rail improvements have proceeded continuously during the past twenty years, the other solutions are largely untried in the G.T.A. and, if they are to be successful, will require careful planning and operational testing, probably by means of specific demonstration projects. Furthermore, since the expansion of bus services in one form or another is absolutely essential, the future operation of the cross-boundary road system will need to be considered. This will require analysis of the need for road improvements in various corridors in order to at least attain a manageable operation of the road system.

From the foregoing, there is a strong case for establishment of a planning framework to deal with the necessary improvements to inter-regional transit services. There remains, however, the need to define the scope of that planning effort. Should it be directed at operational issues only or should it encompass broader strategic concerns relating, for example, to financing, land use and development, and rapid transit expansion ? Logically, it would seem that the two cannot be divorced, primarily because a range of transit solutions will be required to effectively meet future inter-regional transit needs. Metropolitan Council should therefore support establishment of a group or agency at the Provincial level with responsibility for a range of inter-regional transit planning functions, considering all service options and both operational and strategic aspects of improved inter-regional services. Furthermore, since the significant expansion of cross-boundary bus service will affect the operation of the road system, the group or agency in charge of inter-regional transit coordination should also have responsibility for coordination of inter-regional road improvements. The organizational options for such a group are discussed in a following section of this chapter; the key point to be made is the necessity of a broad planning mandate. This point was not explicitly included in the T.T.C. conclusions with respect to MTC's mandate which emphasizes evaluation of service proposals, initiation and negotiation of fare service integration agreements and development of appropriate funding policies for inter-regional services, all of which are also valid components of the MTC mandate.

Metropolitan Council should also request a commitment from the Provincial government to support feasibility studies and demonstration projects of improved inter-regional transit services, generally at a 100% subsidy level. Such a commitment is required because many of the appropriate transit solutions are untried in the G.T.A. and will require careful planning and on-going evaluation. A precedent has been set with the recently approved Kipling Inter-regional Bus Terminal Functional Design and Gateway Overview Study.

2. Financing Issues

A key aspect of improved inter-regional transit service relates to fares, both levels and methods of payment, which immediately raises larger questions of overall transit financing. In fact, the question of finances is probably the major issue to be addressed in considering improved inter-regional transit services, assuming that fare integration will be a significant aspect of that improved service.

A common assumption has been that, with fare integration, total transit fare revenues will decrease and, therefore, subsidies, provided by either or both municipal and provincial levels of government, must increase. This will be the case if integrated fares are lower than the sum of the existing independent fares, as is currently intended. However, the impact on fare revenues will depend on the degree of fare reduction adopted.

Metropolitan Council has adopted a position that fare integration and service coordination among the T.T.C. and other transit operators be adopted only if there is a financial arrangement which guarantees no adverse impact on T.T.C. fares, levels of service or the taxpayers of Metropolitan Toronto. However, fare integration can produce numerous benefits, both financial and otherwise, for residents of Metro. Without these transit improvements the level of congestion on the Metropolitan road system would be greater. Improved regional transit accessibility will promote employment growth in various areas of Metro, particularly the sub-centres which can serve as major inter-regional transit interchange locations. A shift of Scarborough residents from the Danforth subway to the Lakeshore East GO line could defer the need for the Downtown Rapid Transit Line. These, and other possible benefits should be considered in addition to any costs of improved inter-regional services. Specific new or improved cross-boundary services would likely result in benefits to Metro, the Region or municipality whose residents are served, and the Province. In such cases, an equitable funding arrangement would see a sharing of operating subsidies by all three parties. This was supported in principle in the T.T.C. paper.

Metropolitan Council has also referred a motion from Mayor Lastman to the T.T.C. that proposed that negotiations for integrated transit not proceed unless a cost-sharing formula is devised whereby the regions beyond Metro agree to share the T.T.C's operating subsidy for a period of at least ten years. As the T.T.C. has noted in a March, 1987 report, such a position would likely promote a similar request for Metro contributions to municipal transit operations in Peel and York which serve Metro residents, and any contributions to T.T.C. subsidies would likely be accompanied by requests to be involved in T.T.C. operations, including representation on the Commission. It is strongly suggested that the need for and impacts (both positive and negative) of inter-regional services, be considered on their own merits, and that the subsidies for those services be shared by M.T.C. and the municipalities which benefit, including Metropolitan Toronto where appropriate. Notwithstanding this separate process for examining cross-boundary transit services, the T.T.C. service standards must be maintained for the portion of the cross-boundary routes within Metropolitan Toronto.

Improved inter-regional transit services will likely affect overall fare revenues and therefore will necessitate a review of Provincial subsidy policy. A consultant study is now underway which will, hopefully, lead to the establishment of subsidy policy guidelines. Metro Council should consider on a case by case basis, the possibility of assuming some additional subsidy for cross-boundary services if some tangible benefit to Metro can be shown through demonstration projects and operational testing of new services.

There is also the question of concession fares provided for students and senior citizens and the special services provided for the disabled. Currently, there is no consistency among the various operators in terms of either fare levels or eligibility and, if inter-regional services are to be available to these groups, some co-ordination will be necessary. Any new subsidy policy must deal with concession fares and special services, with the objective of coordinating fare levels and eligibility requirements among the various operators.

Finally, with respect to capital improvements necessary to accommodate improved inter-regional transit services (e.g. at subway stations), M.T.C. should provide 100% subsidies. However, in specific cases within Metropolitan Toronto, where a Metropolitan benefit can be demonstrated, Council should consider assuming some portion of the cost.

3. Level of Service Issues

As already noted in the previous section, cross-boundary ridership, while projected to increase steadily, is and will continue to be a relatively small proportion of T.T.C. ridership. It is only logical that initiatives adopted to improve inter-regional services not negatively affect the service provided to the vast majority of Metropolitan riders. The responsibility for establishing service levels within Metro should remain with the T.T.C.

There is also the question of who determines the appropriate level of cross-boundary service. As previously recommended, a demonstration program approach to new services would serve to establish the basic level of service. Discussion of possible service modifications should be by the operators of the service and could be co-ordinated through the existing Transit Forum.

4. Organizational Issues

As discussed in the Paterson study, there are a number of alternative organizational frameworks for the improvement of inter-regional transit services. The key question to be addressed is the extent of change required. On the one hand, previous attempts at co-operation have not proved entirely successful and some additional effort will be required; on the other hand, inter-regional trips will continue to be a small proportion of total transit ridership and their accommodation should not unduly disrupt existing organizational arrangements.

A key player will undoubtedly be M.T.C. Not only will the Ministry have a major financial stake, but it is well situated to co-ordinate both

individual route or service improvements, and broader strategic and policy matters including consideration of complementary road improvements. To minimize potential disruptions, an incremental approach should be adopted. The co-ordination option, with M.T.C. taking the lead role (which was recommended in the Paterson study), appears to be the most reasonable initiative which would not preclude more drastic changes such as "federation" or "amalgamation" in the future, should co-ordination efforts not be successful. Rather than establish a new agency, which would introduce an additional level of bureaucracy, it is suggested that existing mechanisms, including the Transit Forum, can meet the requirements with some modifications.

A proposed organizational structure is shown in Figure 3. It is suggested that an expanded existing or new office within the Ministry, under the direction of a senior executive, be charged with overall inter-regional transportation (roads and transit) co-ordination in the G.T.A. The inter-regional transit co-ordination function would be undertaken within this broader mandate. M.T.C. staff would be supported on an ongoing basis by two or possibly three groups of municipal representatives. A strategic Transportation Planning Forum, with planning and financial officials, would review issues related to long-range planning for transportation in general including rapid transit, and issues relating to fares and subsidies. Appropriate Metropolitan representatives in such a Forum would be the Commissioner of Planning and the Chief Administrative Officer. The Transit Forum, which already exists, would assist in evaluating service proposals and in initiating and negotiating fare integration and service coordination agreements. The establishment of a separate 'Roads Forum' may also be appropriate. With respect to the resolution of inter-regional transit issues, joint meetings of the Transportation Planning Forum and the Transit Forum would be convened when major decisions are needed or when the individual forums have differing views. If deemed desirable, an independent Inter-Regional Transit Advisory Committee, comprising independent technical experts and/or citizens could be set up to advise on both general and specific issues. Political involvement

when necessary, would be through existing standing committees and municipal Councils, with the officials on the two forums reporting as required. In the case of Metropolitan Toronto, T.T.C. staff would report to the Commission and the Technical Transportation Planning Committee (which includes the Chief General Manager of the T.T.C.) in consultation with the Chief Administrative Officer would report to the Transportation Committee.

The M.T.C. should also pursue the formation of regional transit authorities in Peel, York and Durham to coordinate inter and intra-regional transit services and policies. If this was achieved, the number of transit agencies involved in inter-regional transit coordination would be reduced from 13 to 5. The reduction in the number of transit agencies operating within the area would simplify inter-regional transit coordination and would appropriately locate the responsibility for transit with the Regional Municipalities, with which Metropolitan Toronto, as a Regional Government, deals on a regular basis.

5. Metropolitan Objectives

In view of the above important Metropolitan issues, it is proposed that the following objectives be endorsed by Metropolitan Council:

(a) To improve the level of transit service for Metropolitan residents;
(b) To maximize transit ridership and modal split for travel across the Metropolitan boundary;
(c) To support the Metropolitan Official Plan policies relating to transit-oriented sub-centres;
(d) To optimize the use of existing transit infrastructure; and
(e) To minimize the financial impacts to Metropolitan Toronto and the Toronto Transit Commission with the constraint that there be no adverse impact on T.T.C. fares.

and that the degree of achievement of these 5 objectives be the basis for Metropolitan Council approval of any specific fare integration or service coordination schemes.

E. CONCLUSIONS

Peak period travel across the Metropolitan boundary has increased over the last ten years by approximately 80%. Based on current projections of population, employed labour force and employment in the Greater Toronto Area, travel forecasts for the year 2011 indicate that total cross-boundary peak period travel will more than double. Because of the limited opportunities to increase road capacity, the percentage of travel by transit must increase significantly to accommodate this increased travel demand.

A limited degree of coordination among GO Transit, T.T.C. and the municipal transit agencies operating adjacent to Metropolitan Toronto has been achieved. Notwithstanding these efforts and the fact the cross-boundary transit ridership has more than doubled over the last ten years, the percentage of total trips by transit, while rising steadily from 13.6% in 1975 to 17.6% in 1985, is still low. In order to accommodate the forecast increase in cross-boundary travel, recent studies have indicated that Metropolitan Toronto, the surrounding Regions and the Province should aim to increase the transit modal splits across the West, North and East boundaries of Metro to 35%, 25% and 30% respectively. Achievement of these target modal splits would result in a tripling of inbound a.m. peak period transit trips across the West boundary, more than quadrupling across the North boundary and more than doubling across the East boundary. To achieve these target modal splits, improvements to the road system will be required so that it operates at an acceptable level of service.

It is important to note that transit capacity increases alone will not be sufficient to affect the significant increase in transit modal split that is required. Fare integration and service coordination of cross-boundary transit services will be essential to enhance the overall level of transit service. Careful planning of fare integration and service coordination improvements will be critical in determining the success of these efforts. These improvements should generally be implemented incrementally based on the results of feasibility studies and/or demonstration projects.

One exception to the incremental implementation of selected improvements may be related to fare integration where the feasibility of an extended one-zone municipal system (i.e. excluding GO Transit) should be considered. Currently short distance transit trips across the boundary and some longer distance transit trips from eastern Mississauga and southern York Region, compared to trips from northern Scarborough, are penalized because an additional transit fare is charged to cross the Metro boundary. An extension of the present one-zone T.T.C. system to the west and the north would result in a more equitable fare system based on distance from downtown Toronto and would enhance the possibilities of achieving significant modal split increases across the West and North Metropolitan boundaries.

In implementing various schemes, additional operating and capital subsidies will be required and the allocation of these subsidies will likely have to be negotiated among M.T.C. and the appropriate municipalities. An additional cost to Metropolitan Toronto for such improvements should not be immediately rejected since there could be many benefits to any given fare integration and/or service coordination scheme, including the following:

- o increasing the overall transit level of service for Metropolitan residents;
- o alleviating congestion on the road systems in Metropolitan Toronto by making transit travel more attractive;
- o alleviating congestion on crowded sections of the rapid transit system, and possibly deferring, or reducing the scale of, transit improvements that might otherwise be required;
- o reducing T.T.C. operating costs if bus routes can be shortened through rationalization of services; and

- o supporting the Metropolitan Official Plan policy of encouraging the development of transit oriented sub-centres which, to a great extent, will be relying on labour force resident in the adjacent Regions.

Recognizing that recent attempts at formalizing regional transit coordination have not been entirely successful, a concerted effort by M.T.C., Metropolitan Toronto, the Toronto Transit Commission and the surrounding Regional and Area Municipalities is now required to affect the necessary improvements, including the possible formation of regional transit authorities in the Regional Municipalities bordering Metropolitan Toronto.

It is therefore concluded that:

1. The Ministry of Transportation and Communications, as part of its mandate to coordinate the provision of transportation (road and transit) facilities and services in the Greater Toronto Area, should formalize and expand its role of co-ordinator of inter-regional transit services and policies;

2. M.T.C. should pursue the formation of regional transit authorities in the Regional Municipalities of Durham, Peel and York;

3. M.T.C., in the role of co-ordinator, would:
   (a) evaluate service proposals, initiate demonstration projects where appropriate and monitor results;
   (b) initiate and negotiate fare integration and service coordination agreements; and
   (c) develop appropriate funding policies for inter-regional services.

4. M.T.C. in the role of co-ordinator, should be supported by:
   (a) the existing Transit Forum comprised of a senior manager from each of the transit departments and the T.T.C. to deal with operating and level of service issues; and

(b) a new Transportation Planning Forum comprised of senior officials from each of the regional municipalities and Metropolitan Toronto to deal with strategic planning and financial issues;

5. policy guidelines for the funding of inter-regional transit improvements should be developed which provide for Provincial cross-boundary subsidies for GO and municipal bus routes (with local contributions) and subsidies to allow reduced fares for cross-boundary trips;

6. GO Transit bus routes and municipal cross-boundary bus routes should be expanded and reorganized on an incremental basis and municipal bus service to GO Rail stations expanded;

7. T.T.C. bus services should be better coordinated with GO Rail services through reorientation of routes and/or relocation of existing GO stations. Joint passes/tickets selling at a price less than the total of the two separate fares should be implemented.

8. M.T.C. decisions to implement specific fare integration and service coordination improvements should be based on the results of feasibility studies and/or demonstration projects which are funded 100% by the Ministry;

9. Metropolitan Council should indicate its willingness to consider Metropolitan contributions to operating subsidies where the results of the feasibility studies and/or demonstration projects prove that there are net benefits to the T.T.C., or to the Metropolitan Corporation or its residents. In assessing any specific improvement, Metropolitan and T.T.C. staff would consider the following objectives:

(a) to improve the level of transit service for Metropolitan residents;

(b) to maximize transit ridership and modal split for travel across the Metropolitan boundary;

(c) to support the Metropolitan Official Plan policies relating to transit-oriented sub-centres;

(d) to optimize the use of existing transit infrastructure; and

(e) to minimize the financial impacts to Metropolitan Toronto and the Toronto Transit Commission with the constraint that there be no adverse impact on T.T.C. fares;

These would be the basis for measuring costs and benefits which would be reported to the Toronto Transit Commission and, through the Transportation Committee, to Council:

10. capital improvements required to improve service coordination should be funded 100% by the Ministry of Transportation and Communications except where it can be shown that there are significant benefits to the T.T.C., or to the Metropolitan Corporation or its residents; and

11. Metropolitan Toronto's top priorities for fare integration and service coordination are:

(a) fare integration between GO Transit and T.T.C. at Union Station implemented through joint passes/tickets; and

(b) fare integration and service coordination between Mississauga Transit and T.T.C. across the portion of the west Metro boundary south of Highway 401.

It should be noted that conclusions 1, 3, 5, 6 and 11(a) are essentially the same as conclusions supported by the Toronto Transit Commission. Conclusions 4, 8, 9, 10 and 11(b) are not inconsistent with those of the Commission, but go further with respect to defining the proposed administrative and implementation process.

Table 1.

1986 Transit Ridership Across

Metropolitan Toronto Boundary

Transit Agency	Daily Two-way Trips	Annual Ridership	% of Annual Ridership
Toronto Transit Commission (six contract services, three new services started in 1987)	8,300	2,490,000	7.9
GO Transit*			
(seven commuter rail lines)	46,900	14,070,000	44.5
(11 bus services)	25,000	7,500,000	23.8
Mississauga Transit (17 services)	19,900	5,952,000	18.8
Markham Transit** (3 services)	3,500	980,000	3.1
Brampton Transit (1 service)	700	177,000	0.6
Vaughan Transit Interfacing with T.T.C. at the Boundary (4 services)	1,600	403,000	1.3
TOTALS	105,900	31,572,000	100.0

Notes:

*GO Transit

- o March 1987 Ridership Statistics
- o Total daily GO System Ridership was 60,100 Rail and 36,100 Bus.
- o Cross-boundary bus ridership estimated as 83.5% of total bus system ridership less 6,000 rides transferring to rail services;
- o Cross-boundary rail ridership 78.0% of total rail system ridership;

** Markham Transit

- o Cross-boundary ridership includes an estimate of ridership on the one Markham Transit service that interfaces with T.T.C. at the boundary.

Table 2

Past Growth in Transit Trips Across the Metro Boundary
7:00 a.m. - 9:00 a.m.

	GO Rail			Bus			Total Transit		
	1975[1]	1985[2]	Growth	1975[1]	1985[2]	Growth	1975[1]	1985[2]	Growth
Inbound									
West Boundary	5,429	12,431	+7,002	2,824	7,197	+4,373	8,253	19,628	+11,375
North Boundary	0	1,242	+1,242	2,282	5,520	+3,238	2,282	6,762	+4,480
East Boundary	1,412	3,154	+1,742	303	1,004	+701	1,715	4,158	+2,443
Total	6,841	16,827	+9,986	5,409	13,721	+8,312	12,250	30,548	+18,298
Outbound									
West Boundary	93	194	+101	2,069	4,136	+2,247	2,162	4,510	+2,348
North Boundary	0	0	0	1,987	4,540	+2,553	1,987	4,550	+2,553
East Boundary	47	232	+185	763	767	+4	810	999	+189
Total	140	426	+286	4,819	9,623	+4,804	4,959	10,049	+5,090

Notes:

1. 1975 transit modal splits as follows:

	Inbound	Outbound
West Boundary	16.4%	6.5%
North Boundary	7.6%	9.9%
East Boundary	17.7%	14.3%

2. 1985 transit modal splits as follows:

	Inbound	Outbound
West Boundary	22.3%	9.3%
North Boundary	10.3%	11.0%
East Boundary	21.2%	12.4%

Source: 1985 Metro Cordon Count Program, Exhibit 37, Page 79.

Table 3

Projected Year 2011 Transit Trips Across the Metro Boundary
7:00 a.m. - 9:00 a.m. Inbound

	GO Rail			Bus			Total Transit		
	1985[1]	2011[2]	Growth	1985[1]	2011[2]	Growth	1985	[1]2011[2]	Growth
West Boundary	12,431	27,100	+14,700	7,197	27,100	+19,900	19,628	54,200	+34,600
North Boundary	1,242	10,500	+9,300	5,520	21,600	+16,100	6,762	32,100	+25,400
East Boundary	3,154	6,900	+3,700	1,004	3,000	+2,000	4,158	9,900	+5,700
Total	16,827	44,500	+27,700	13,721	51,700	+38,000	30,548	96,200	+65,700

Notes:

1. 1985 transit modal splits as follows:

   West Boundary 22.3%
   North Boundary 10.3%
   East Boundary 21.2%

2. 2011 target transit modal splits, based on judgement, as follows:

   West Boundary 35.0%
   North Boundary 25.0%
   East Boundary 30.0%

Sources:
1. 1985 Metro Cordon Count Program
2. Estimates prepared by Metro Planning Department

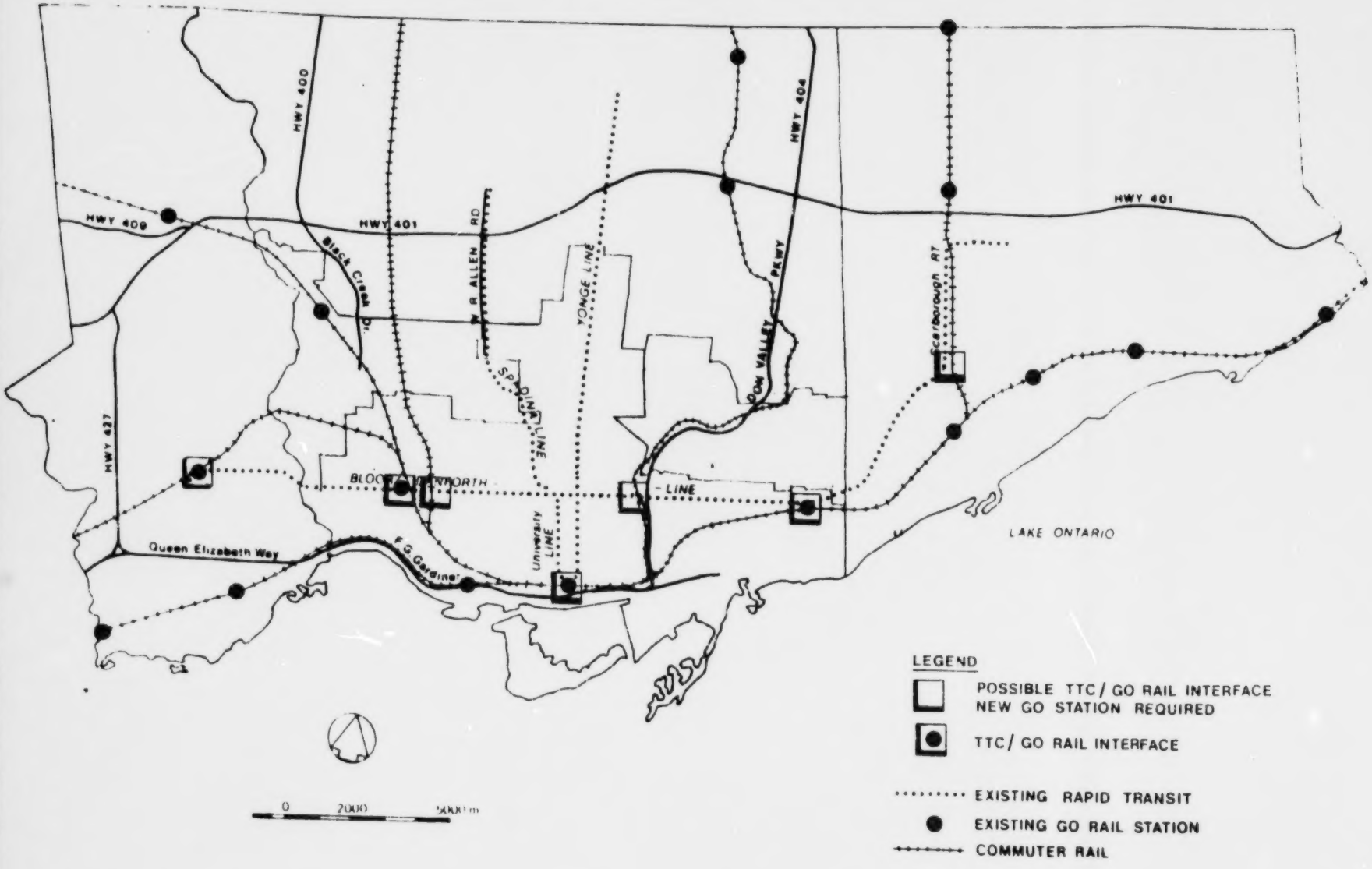

FIGURE 1
GO RAIL /TTC RAPID TRANSIT INTERFACE OPPORTUNITIES

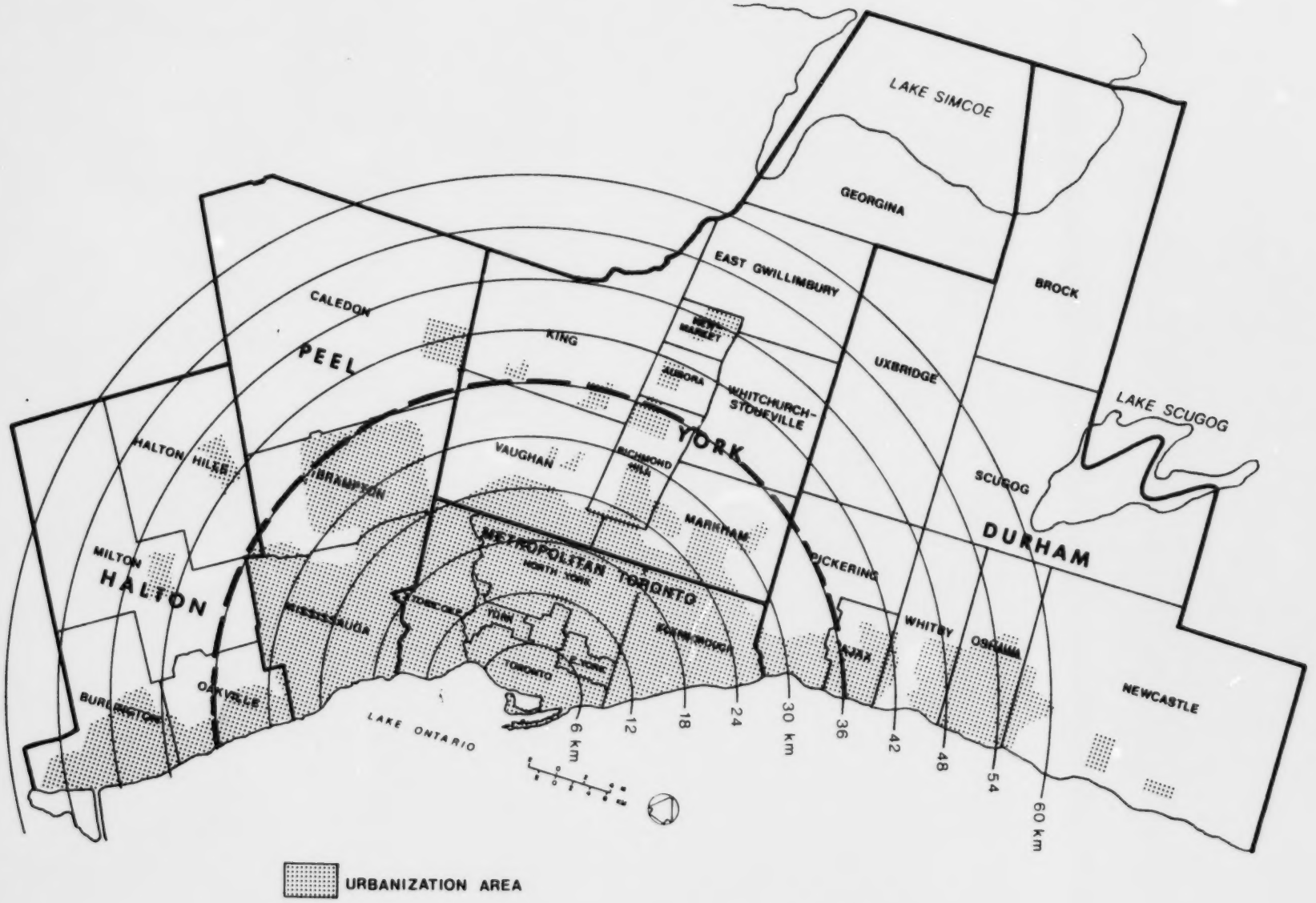

FIGURE 2
RADII EMANATING FROM DOWNTOWN TORONTO

FIGURE 3

PROPOSED ORGANIZATION

INTER-REGIONAL TRANSIT CO-ORDINATION